

S
363.17
L3ambe
1993

DEPARTMENT OF STATE LANDS

MONTANA STATE LIBRARY
S 363.17 L3ambe 1993 c.1
Amplification of Moen Builders environme



3 0864 00082444 4

P.O. BOX 201601



MARC RACICOT, GOVERNOR

STATE OF MONTANA

(406) 444-2074

1625 ELEVENTH AVENUE
HELENA, MONTANA 59620-1601

January 4, 1993

Mr. Harold Chambers
Montana State Library
Capitol Station
Helena, MT 59620

STATE DOCUMENTS COLLECTION


JAN 1 1993

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59620

Dear Sir or Madam:

Enclosed, please find a copy of an environmental assessment prepared by the Department of State Lands in response to an application for a small miners cyanide operating permit. Comments may be submitted to the Department at the above address until January 29, 1993.

Sincerely,


Pete Strazdas
Reclamation Program Supervisor
Hard Rock Bureau
Reclamation Division

/etc

enclosure

c: Bob Winegar



JAN 1 1993

MONTANA STATE LIBRARY
1515 E. 6th AVE.
HELENA, MONTANA 59624

ENVIRONMENTAL ASSESSMENT

APPLICANT: Moen BuildersTYPE OF OPERATION: SMES - CYANIDELOCATION: Sec. 27: T6S, R3WCOUNTY: MadisonPERSON PREPARING E.A.: Pete StrazdasAPPLICATION COMPLETE: 1/4/93
DateE.A. COMPLETE: 1/4/93
Date

	POTENTIAL IMPACTS					
	A	B	C	LONG TERM	SHORT TERM	AMPLIFICATION
PHYSICAL ENVIRONMENT						
1. <u>TOPOGRAPHY</u>			X	X		X
2. <u>GEOLOGY</u> ; Stability			X	X		X
3. <u>SOILS</u> ; Quality, Distribution			X		X	X
4. <u>WATER</u> ; Quality; Quantity; Distribution			X		X	X
5. <u>AIR</u> ; Quality			X		X	
6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources			X		X	
BIOLOGICAL ENVIRONMENT						
1. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats			X		X	X
2. <u>VEGETATION</u> ; quantity, quality, species			X		X	X
3. <u>WILDLIFE</u> ; grazing, crops			X		X	
ENVIRONMENT						
4. <u>STRUCTURES AND MOSES</u>			X		X	
5. <u>UNIQUENESS, DIVERSITY</u>			X		X	
6. <u>QUALITY</u> ; quantity and			X		X	
7. <u>WATER</u> ; quantity and distribution			X		X	
ENVIRONMENTAL HEALTH & SAFETY						
8. <u>ENVIRONMENTAL HEALTH & SAFETY</u>			X		X	

				POTENTIAL IMPACTS		
	A	B	C	LONG TERM	SHORT TERM	AMPLIFICATION
6. <u>COMMUNITY & PERSONAL INCOME</u>			X		X	
7. <u>EMPLOYMENT</u> ; quantity and distribution			X		X	
8. <u>TAX BASE</u> ; local and state tax revenue			X		X	
9. <u>GOVERNMENT SERVICES</u> ; demand			X		X	
10. <u>INDUSTRIAL, COMMERCIAL</u> and <u>AGRICULTURAL</u> activities			X		X	
11. <u>HISTORICAL and ARCHAEOLOGICAL</u>			X		X	
12. <u>AESTHETICS</u>			X		X	
13. <u>ENVIRONMENTAL PLANS and GOALS</u> ; local and regional			X		X	
14. <u>DEMANDS on ENVIRONMENTAL RESOURCES</u> of land, water, air and energy			X		X	
15. <u>TRANSPORTATION</u> ; networks and traffic flows			X		X	

PUBLIC INVOLVEMENT: Public Notice of EA

ALTERNATIVES CONSIDERED: Yes

COMPLIANCE STATUS: Full Compliance

RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS: Not necessary at this level of disturbance

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:

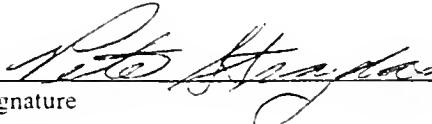
Water Quality Bureau

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:

A: Significant Unavoidable Impacts

B: Insignificant as a result of conditioned mitigation

C: Insignificant as proposed


Signature

AMPLIFICATION OF MOEN BUILDERS ENVIRONMENTAL ASSESSMENT

BACKGROUND

Moen Builders have applied for a Small Miner Cyanide Operating Permit under 82-4-305(7), MCA. This permit would cover the cyanide facility portion of the mine, mill and tailing impoundments which Moen Builders would be operating under the Small Miners Exclusion Statement (SMES). This facility would be located in Prospect Gulch, 1.3 miles southwest of Virginia City, Madison County.

Moen Builders would mine and reprocess an estimated 40,000 tons of waste rock and mill tailing from the old Prospect mine and mill. This material would be run through a gravity separation mill at an estimated rate of 100 tons per day. This process would yield a gravity tailing which would report to a tailing impoundment constructed in Prospect gulch, and a concentrate which would report to a refinery building for further treatment in a cyanide circuit. It is estimated that 1,000 tons of concentrate would be processed per year.

The refinery building would be constructed on a bermed concrete pad, capable of containing any accidental tank spillage or rupture. The concentrate would be processed in agitated cyanide tanks. Cyanide would be killed within the refinery building to 1 - 3 ppm Weak Acid Dissociable (WAD) cyanide and discharged to a lined impoundment.

The cyanide tailing would be conducted to the impoundment in a double walled pipe. The impoundment would be double lined with 30 and 20 mil PVC liner and equipped with a leak detection system between the liners. Total capacity of this impoundment would be 5,500 tons, with dimensions of 80' X 100' X 15'.

The gravity impoundment, which is a part of the SMES but not of this permit, is constructed in a wide portion of Prospect gulch. The impoundment covers approximately 3 acres. Prospect gulch, an intermittent/ephemeral stream, is diverted to the west side of the impoundment in a channel sized to carry the 100 year flood event.

The waste rock and tailings which are to be mined are located below the gravity impoundment. Reclamation of the ground under the waste would proceed concurrently with mining.

PHYSICAL ENVIRONMENT

1. Topography: The cyanide facility is on the west bench of Prospect gulch, an intermittent drainage, at an elevation of 6,025 feet. Natural slopes are relatively level. The refinery building and concentrate tailing impoundment would occupy approx-

imately 1.1 acres. This area would be flatter than surrounding topography.

The gravity impoundment, which is not subject to this permit, would change the configuration of the gulch, creating a 3 acre flat in the middle of the gulch with a by pass channel around the west side.

2. Geology: Waste rock and old mill tailing which has been deposited beside and in Prospect gulch would be removed. This would improve the hydrologic functioning and stability of the drainage.

3. Soils: Approximately 12,500 yards of soil have been salvaged in conjunction with construction activity. This soil has been stockpiled and would be replaced at reclamation. Soil would be replaced at a thickness of two feet. The concentrate impoundment would be capped with a three foot thickness of clay before soil placement.

Some loss of soil microbial viability is expected for the short term. Soil loss is not expected because the stockpiles have been and would be seeded.

4. Water: The water requirements of the mill, estimated at 30 gallons per minute (gpm), would be met by a well developed for this purpose. There are four springs in Prospect gulch, three above and one below the project. The one below, flows at a rate of 12 gpm, and maintains surface flow for 150 feet before submerging. There are no other wells or springs below the project. Prospect gulch enters Alder gulch one mile below.

Two ground water monitoring points are proposed. A monitoring well would be drilled immediately below the concentrate tailing impoundment, and the spring below the gravity impoundment would be monitored.

BIOLOGICAL ENVIRONMENT

1. Terrestrial, Avian, and Aquatic: The area is year round mule deer habitat. Elk and moose are occasional transients. The concentrate impoundment would be fenced with an eight foot high fence to exclude wildlife and livestock.

There are no known raptor nests within the area.

Prospect gulch is dry except during storm events or runoff. The nearest fishery is found one mile downstream at the kids fishing pond on Alder gulch. This pond is stocked with rainbow trout. Alder gulch contains brown and rainbow trout.

2. Vegetation: Native vegetation in the area is a bluebunch wheat -grass/Idaho fescue/big sagebrush community. Disturbances

would be reclaimed to a mostly native mix of wheatgrasses and fescues.

